

IN THE CLAIMS:

By this amendment, claims 1, 3-6, 10-13, 17, 29, 64 and 65 stand currently amended, claims 7-9, 14-16, and 18-28 remain withdrawn pending an allowable generic claim. This listing of claims will replace all prior versions, and listings, of claims in the application:

CLAIMS LISTING:

1. (Currently Amended) A vehicle multiple battery system operating a vehicle electrical system connected between a system positive and a system negative terminal, the system comprising: a main battery having a main positive output coupled to an at least one switching device having at least two operating positions and a main negative output; at least one standby battery having an at least one standby positive output coupled to the at least one switching device and an at least one standby negative output coupled to the vehicle electrical system negative terminal; and a main electrical circuit comprising a coupling of the system positive terminal with the at least one switching device, the at least one switching device having at least two operating positions to selectively and exclusively couple either the main or the at least one standby battery positive output to the system positive terminal to start and operate the vehicle electrical system; wherein in a first operating position of an at least two operating positions electrical power is provided exclusively by the main battery at startup of the vehicle electrical system and the main battery is recharged by the vehicle electrical system and an at least one one-way charging circuit receives electrical power from the vehicle electrical system, the at least one one-way charging circuit simultaneously recharging the at least one standby battery without permitting the at least one standby battery to be engaged to start the vehicle

electrical system, operate the vehicle electrical system, or electrically couple to the main battery; and

wherein in a second operating position of the at least two operating positions the main battery is electrically isolated by the one-way charging circuit from the at least one standby battery and the at least one standby battery exclusively provides electrical power to the vehicle electrical system at startup; and

a controller coupled to the main electrical circuit and the one-way charging circuit, the controller switching said at least one switching device based on input from an at least one sensor to selectively and exclusively provide power in each of the switch positions as enumerated, such that the main battery and the at least one standby battery never supply electrical energy to the vehicle electrical system simultaneously.

Claim 2 previously cancelled.

3. (Currently Amended) The vehicle multiple battery system~~apparatus~~ of claim 1, wherein in a second operating position of the at least two operating positions the system positive terminal is coupled directly to the standby positive output.

4. (Currently Amended) The vehicle multiple battery system~~apparatus~~ of claim 3, wherein the main battery is electrically isolated from the at least one standby battery in the second operating position of the at least two operating positions of the at least one switching device and the at least one standby battery provides electrical power at startup and during operation of the vehicle electrical system.

5. (Currently Amended) The vehicle multiple battery system~~apparatus~~ of claim 3, wherein only the coupling of the positive output of the main battery or the positive output of the at least one standby battery are switched by the switching device.
6. (Currently Amended) The vehicle multiple battery system~~apparatus~~ of claim 3, wherein the second operating position of the at least two operating positions electrically isolates the main battery from the vehicle electrical system and introduces only the at least one standby battery.
7. (Withdrawn) The vehicle multiple battery system~~apparatus~~ of claim 3, wherein the controller further comprises an at least one indicator element.
8. (Withdrawn) The vehicle multiple battery system~~apparatus~~ of claim 7, wherein the at least one indicator element is at least one of a klaxon, a horn, a light, a plurality of lights, an LCD panel, a simulated human voice, a human voice, a light emitting diode, a plurality of light emitting diodes.
9. (Withdrawn) The vehicle multiple battery system~~apparatus~~ of claim 3, wherein the at least one indicator element is a plurality of indicator elements having at least one of a red, orange, green, or amber color.
10. (Currently Amended) The vehicle multiple battery system~~apparatus~~ of claim 3, wherein the battery system further comprises a battery housing with a main battery compartment containing the main battery and an at least one standby battery compartment containing the at least one standby battery.
11. (Currently Amended) The vehicle multiple battery system~~apparatus~~ of claim 10, wherein the main battery compartment is located atop the at least one standby battery compartment.
12. (Currently Amended) The vehicle multiple battery system~~apparatus~~ of claim 3, wherein the main battery compartment is located aside the at least one standby battery compartment.

13. (Currently Amended) The vehicle multiple battery system~~apparatus~~ of claim 3, wherein the one-way charging circuit comprises an at least one one-way charging diode.
14. (Withdrawn) The vehicle multiple battery system~~apparatus~~ of claim 3, wherein the at least one one-way charging circuit further comprises an at least one silicon rectifier.
15. (Withdrawn) The vehicle multiple battery system~~apparatus~~ of claim 13, wherein the at least one one-way charging circuit further comprises an at least one Silicon Controlled Rectifier (SCR).
16. (Withdrawn) The vehicle multiple battery system~~apparatus~~ of claim 15, wherein the at least one Silicon Controlled Rectifier (SCR) is coupled to the controller and disables the coupling with the at least one standby battery upon receiving a signal from the controller.
17. (Currently Amended) The vehicle multiple battery system~~apparatus~~ of claim 3, wherein the at least one standby battery comprises a single standby battery.
18. (Withdrawn) The vehicle multiple battery system~~apparatus~~ of claim 3, wherein the at least one battery comprises a plurality of standby batteries.
19. (Withdrawn) The vehicle multiple battery system~~apparatus~~ of claim 15, wherein the at least one sensor further comprises an at least one of: an at least one main battery voltage sensor, an at least one main battery amperage sensor, an at least one standby battery voltage sensor, an standby battery amperage sensor, an at least one switch position sensor.
20. (Withdrawn) The vehicle multiple battery system~~apparatus~~ of claim 3, wherein the controller further comprises at least one of: an at least one microprocessor, an at least one signal processor, an at least one set of lookup tables, an at least one memory device, an at least one security protocol/encryption element and an at least one indicator element.

21. (Withdrawn)The vehicle multiple battery system~~apparatus~~ of claim 3, wherein the controller is a wireless controller system.

22. (Withdrawn)The vehicle multiple battery system~~apparatus~~ of claim 21, wherein the wireless controller system further comprises a wireless controller, a wireless transceiver, and an input device.

23. (Withdrawn)The vehicle multiple battery system~~apparatus~~ of claim 22, wherein the input device is a wireless input device and further comprises an at least one indicator element.

24. (Withdrawn)The vehicle multiple battery system~~apparatus~~ of claim 3, wherein the controller is a network interfaceable controller, the network interfaceable controller further comprising a network interface and transceiver.

25. (Withdrawn)The vehicle multiple battery system~~apparatus~~ of claim 24, wherein the network interfaceable controller is in communication with a Network Operations Center (NOC) via a network.

26. (Withdrawn)The vehicle multiple battery system~~apparatus~~ of claim 25, wherein the network interfaceable controller couples to and communicates with the at least one switching device to detect the position of the at least one switching device and selectively engages the at least one switching device based on the input of at least one of an at least one main battery voltage sensor, an at least one main battery amperage sensor, an at least one standby battery voltage sensor, and an at least one standby amperage sensor.

27. (Withdrawn)The vehicle multiple battery system~~apparatus~~ of claim 3, wherein the controller includes a trigger on the controller that signals the controller to periodically change the switch position of the at least one switching device so as to discharge the at least one standby battery in

the second operating position of the at least two operating positions for periods of time and then switches back to the first operating position of the at least two operating positions.

28. (Withdrawn) The vehicle multiple battery system~~apparatus~~ of claim 26, further comprising an at least one VI sensor.

29. (Currently Amended) The vehicle multiple battery system~~apparatus~~ of claim 3, wherein the multiple batteries are part of an at least one of a six-volt, a twelve-volt, a fourteen-volt, and a twenty-four volt battery vehicle electrical system.

30-63. CANCELED

64. (Currently Amended) The vehicle multiple battery system~~apparatus~~ of claim 30, wherein in the second of the at least two operating positions, the main battery and the one-way charging circuit are electrically isolated from the standby battery and the standby battery is engaged to operate the vehicle electrical system.

65. (Currently Amended) A vehicle multiple battery system operating a vehicle electrical system comprising:

a common positive terminal and a common negative terminal coupled to the vehicle electrical system;

an at least two batteries, each of the at least two batteries having a positive output and a negative output;

an at least one switching device with at least two operating positions, the at least one switching device switching the common positive terminal in a first operating position of the at least two operating positions to one of the positive outputs of the at least two batteries, thereby operating the vehicle and preventing current flow from any of the remaining at least two batteries to the common positive terminal;

a one way charging circuit charging at least one of the remaining at least two batteries not coupled to the common positive terminal in one of the at least two operating positions;

a second operating position of the at least two operating positions wherein the switching device switches the common positive terminal to the positive output of at least one of the remaining at least two batteries not previously coupled to the common positive terminal, preventing current flow from any of the remaining at least two batteries or the previously coupled at least two batteries to the common positive terminal, or between any of the remaining at least two batteries; and

a controller to operate the at least one switching device and to switch between the at least two operating positions based on inputs from an at least one sensor such that only one of the at least two batteries is ever engaged by the vehicle electrical system at any one time.